

Water Recycling Sources Working Group

Date: Oct. 19, 2012

Attendees:

- Faith Pickling
- Julia Chunn-Heer
- Keith Solar
- Gordon Hess
- Dawn Guendert
- Amy Albanese, Office of City Councilmember Sherri Lightner
- Kris McFadden, City of San Diego Stormwater Dept.
- Jennifer Casamassima, City of San Diego Public Utilities Dept.
- Seth Gates, Office of the Independent Budget Analysis

Objective: To identify and evaluate recycled water supply options for the City of San Diego. Prioritize identified options and make recommendations consistent with the City Council's Policy 400-15.

Three recycled water supply options were identified and discussed.

1. Graywater Systems
2. Stormwater
3. Municipal recycled water (potable and non-potable end-use)

Graywater Systems

Graywater is 50 to 80 percent of the wastewater that is discharged from residences. Graywater systems are commercially available that residents can install to take some of the graywater discharges from their homes and reuse that water for landscape irrigation.

Recommendations include:

1. **Implement a "no permit" policy for "simple systems," which is understood to mean systems used for landscape irrigation that discharge less than 250 gallons a day and primarily consist of systems taking discharge water from washing machines and wash basins and does not include a potable water connection, the use of a pump, or affect other plumbing, electrical, mechanical or building components.**
2. **Streamline the permitting process for "complex systems," which is understood to mean systems discharge more than 250 gallons or take discharge water from other elements in a residence such as bathtubs and showers that would require more extensive in-house plumbing modifications. The Development Services Department should work with commercial graywater system designers, installers, and other professionals to identify**

areas within the existing permitting process which could be modified to expedite the review and inspection process for such graywater system installations.

3. **Public Utilities Department, in consultation with DSD, should develop and include information on simple graywater systems in their public outreach materials and social media outreach, and emphasize the use of Best Management Practices to prevent runoff.**
4. **Oversight of "complex systems" should continue to be in the purview of the Development Services Department in order to ensure that plumbing and building code requirements are met.**

Stormwater

The Stormwater Dept. is facing significant increased costs to comply with new water quality regulations (TMDLs), especially related to bacteria loads. Some of these new TMDLs could result in stormwater being treated to levels equal to drinking water. Infiltration is one method for addressing new TMDL regulations. Strategically located infiltration could also provide multiple benefits by supplementing local groundwater supplies to increase capacity and improve water quality. Thus it would be prudent for the City to investigate opportunities for using stormwater as a water supply source to increase and improve local groundwater supplies.

Recommendations include:

1. **Stormwater Dept. and Public Utilities to investigate opportunities for strategic infiltration of stormwater in areas where stormwater could replenish existing groundwater basins. This provides multiple benefits.**
 - a. **Infiltration may be the most cost-effective manner to address more stringent bacteria TMDLs.**
 - b. **Stormwater infiltration could increase the yield of existing groundwater basins and reduce salinity.**
 - c. **Stormwater infiltration would benefit the environment by reducing run-off.**
2. **Public Utilities to increase the focus on characterizing groundwater basins such as the San Pasqual Basin, San Diego Formation and San Diego River System that could be potential local water supplies**
3. **Stormwater Dept. and Public Utilities Dept. jointly work together to investigate potential grant funding for a feasibility and pilot study. One possibility is to develop a multi-beneficial joint project that can be included in the Integrated Regional Water Management Plan for possible Dept. of Water Resources funding.**

Recycled Water

The City of San Diego has been studying the use of recycled water for indirect potable reuse for a number of years. It is highly likely the City will need to continue to increase the beneficial reuse of

wastewater as a condition of any future waivers for the Point Loma WWTP. Most recently the City has accomplished the following.

1. Completed a Recycled Water Study that developed a plan for increasing the beneficial use of recycled water and reducing discharges from Point Loma WWTP through increased non-potable and potable reuse. The Recycled Study developed a technically and economically feasible phased plan for diverting up to 135-mgd of wastewater upstream of Point Loma WWTP to create up to 88-mgd of potable water at a cost comparable with other alternative new water supplies, along with some increase in non-potable reuse.
2. Operated for over one year a 1-mgd Water Purification Demonstration Facility to define regulatory requirements, conduct energy and refine the economic analysis and increase public education and outreach efforts.
3. 2010 Recycled Water Master Plan Update that focused on future opportunities to increase non-potable reuse.

The subcommittee discussed recycled water for both non-potable (purple pipe) and potable reuse.

Recommendations for non-potable include:

1. **Encourage “cost-effective” expansion of non-potable reuse by in-fill within the backbone of the existing system only. Cost effective meaning the City can recover the cost of service.**
2. **Existing recycled water rates were set at a discounted rate in 2001 and no provision was made for increasing them. No adjustment to the discounted rate has been made since 2001. Revisit rate structure for new users of non-potable recycled water and adjust to recover cost of service or at least index them to keep up with increases in other water rates.**

Recommendation for potable reuse include:

1. **The City move forward with recommended next steps in the 2012 Recycled Water Study.**
2. **The City discuss with the County Water Authority its participation in Phase 2 and Phase 3 of Water Purification Project as part of a potential future regional water supply. The advanced treated water from the Water Purification Project will be stored in San Vicente Reservoir, which can serve the region.**
3. **City support legislation to streamline the regulatory process for indirect and direct potable reuse.**

Priorities

1. Recommend City pursue efforts to reduce barriers to the installation of graywater systems and increase public awareness as per our recommendations.
2. Recommend City increase efforts to streamline the regulatory process for direct and indirect potable reuse, explore options for groundwater recharge and discuss with the County Water Authority its participation in the Water Purification Project Phase 2 and 3, as a potential future regional water supply.
3. Stormwater and Public Utilities Depts. Work together to study opportunities to couple investigation of increased/enhanced infiltration with development of groundwater supplies.